

Technical Memorandum



City Of Milpitas

Task: Developers Impact Fee Analysis
To: Darryl Wong
Prepared by: Marc Nakamoto
Reviewed by: Yousra Tilden
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Introduction

The City of Milpitas has authorized RMC, Inc. to perform the Developers Impact Fee Analysis associated with two tiers of development. This technical memorandum summarizes definitions, background information, findings, and conclusions.

The objective of a Developer Impact Fee is to recover capital costs associated with required facility improvements or infrastructure capacity allocation for a new development. Under this premise, sewer capacity costs, main pump station costs, and wastewater treatment capacity costs should be recovered from new developments. Therefore, a Sewer Capacity Fee, a Main Pump Station Capacity Fee, and a Wastewater Pollution Control Plant (WPCP) Capacity Fee were developed.

At the onset of the evaluation, the three fee elements above were designed to make up the Developer Impact Fee. However, during the evaluation, the basis for assessing the Main Pump Station Capacity Fee was revised through discussions with City staff. Subsequently, it was decided that the Main Pump Station Capacity Fee would be a stand alone fee that is assessed on a different basis than the Developer Impact Fee reward. Therefore, the Developer Impact Fee will be comprised of the Sewer Capacity Fee and WPCP Capacity Fee.

The goal of this analysis is to develop the Developers Impact Fee and the Main Pump Station Capacity Fee.

Definitions

The following nomenclature was defined for clarity of the analysis.

- **Base Wastewater Flow (BWF)** is the estimated total wastewater flow from a development/parcel excluding inflow and infiltration.
- **Existing BWF** is the estimated current base wastewater flow based on the existing (2002) land use and flow factors. The existing base wastewater flow was evaluated as part of the 2002 Master Plan (MP). The 2004 Master Plan Revision incorporated the analysis of the 2002 Master Plan.
- **2004 Master Plan Buildout BWF** is same as the 2002 Master Plan Buildout BWF. This estimated wastewater flow is based on the current general plan land use (2004 Master Plan, Appendix A, maps 3 & 4).
- **Development Proposed BWF** is the proposed wastewater flow associate with a specific development plan. Wastewater flows may be more or less than 2004 Master Plan Revision Buildout BWF. This Developer Proposed BWF would be the basis for fee allocation.
- **Purchased Treatment Plant Capacity** is the wastewater flow allocation that has been purchased for a specific parcel. The wastewater flow allocation is transferable with the sale of the parcel.

- **Treatment Plant Fee** is the existing sewer fee that is assessed to new developments. This is a different fee than the WPCP Capacity Fee that is part of the Developer Impact Fee. The fee should be applied to the incremental BWF above the Purchased Treatment Plant Capacity up to the 2004 Master Plan Revision Buildout BWF (2004 Master Plan Revision Buildout BWF minus Purchased Treatment Plant Capacity) or (Development Proposed BWF minus Purchased Treatment Plant Capacity). [Note: This fee is typically applied on a per dwelling unit ~~basis-basis~~, for residential or by floor area or documented alternative method for commercial/industrial areas. Adjustments should be made to account for the purchase treatment plant capacity.]
- **Developer Impact Fee** is the proposed new fee (WPCP Capacity Fee and Sewer Capacity Fee) that would be applied to the incremental BWF above the 2004 Master Plan Revision Buildout BWF (Development Proposed BWF minus 2004 MP Buildout BWF).
- **Main Pump Station Capacity Fee** is a proposed new fee that would be assessed to all new developments. The fee would be applied to the incremental BWF above the Purchased Treatment Plant Capacity (Development Proposed BWF minus Purchase Treatment Plant Capacity).
- **Water Pollution Control Capacity Fee**
- **Connection Fee**
- **Sewer Bypass Fee** is a fee for development beyond sewer master plan flow levels. Replaced by Impact Fee described above.

Background

The concept behind a Developer Impact Fee is for new development to pay for necessary infrastructure improvements or capacity purchase. City staff decided that the Developer Impact Fee should be assessed on necessary improvements or capacity needs above the 2004 Master Plan Revision. Therefore, the Developer Impact Fee should be assessed to new developments based on infrastructure or capacity needs above the requirements for the parcel that was modeled in the buildout condition in the 2004 Master Plan Revision. The 2004 Master Plan Revision was an update of the 2002 Master Plan with refinements using 2004 wet weather flow and sewer invert measurement data. The 2004 Master Plan Revision did not incorporate any land use refinements to 2002 Buildout scenario; therefore, Average Dry Weather Flow (ADWF) for the 2002 Master Plan and the 2004 Master Plan Revision are identical.

New development in the City of Milpitas will be subject to ~~three~~four fees: Treatment Plant Fee, Developer Impact Fee, ~~and~~ Main Pump Station Fee, and connection fees.

The Treatment Plant Fee would apply to a development for the increase in wastewater flow from the "Previously Purchased Treatment Plant Capacity" up to the estimated buildout (baseline) flow scenario from the 2004 Master Plan Update.

The Developer Impact Fee would apply to a development with wastewater flows that are greater than the buildout (BWF) scenario in the 2004 Master Plan Revision. The buildout (BWF) scenario from the 2004 Master Plan Revision was selected as the baseline condition for assessing the Developer Impact Fee. Only developments with proposed flow above this baseline would be assessed the Developer Impact Fee on the incremental flow above the baseline.

The Main Pump Station Capacity Fee would apply to development for the increase in wastewater flows from the "Previously Purchased Treatment Plant Capacity" up to the total estimated flow from the development. The Main Pump Station Capacity Fee only applies to developments with wastewater flows greater than the Previously Purchased Treatment Capacity.

The following example illustrates the procedure for assessing the Developer Impact Fee and Main Pump Station Fee. The example also illustrates how the Treatment Plant Fee could be assessed on a flow basis with a credit for the Previously Purchased Treatment Capacity.

Example:

Wastewater Flow Characteristics for Parcel A

Previously Purchased Treatment Plant Capacity = 1,000 gpd

2004 Master Plan Update Buildout Base Wastewater Flow = 1,500 gpd

Actual Proposed Development Base Wastewater Flow = 5,000 gpd

Fee Schedule for Parcel A

Treatment Plant Fee = $(1,500 - 1,000) * (\text{Treatment Plant Fee Rate})$

Developer Impact Fee = $(5,000 - 1,500) * (\text{Developer Impact Fee Rate})$

Main Pump Station Capacity Fee = $(5,000 - 1000) * (\text{Main Pump Station Capacity Fee Rate})$

TOTAL SEWER FEE = (Treatment Plant Fee) + (Developer Impact Fee) + (Main Pump Station Capacity Fee)

Footnote:

- a. A theoretical flow based Treatment Plant Fee is shown to illustrate the credit for the Previously Purchase Treatment Capacity. In practice, the Treatment Plant Fee is determined on a dwelling unit basis for residential developments and on a floor area basis for commercial and industrial developments.

For the fee evaluation, four new developments were considered. Three projects are proposed for the near-term (Tier 1) and one project is proposed for the long-term (Tier 2).

Tier 1 Projects include:

1. KB residential development (400 units) to the north of the Elmwood Rehabilitation Center.
2. Swenson residential development (300 units).
3. Auto Dealers commercial development (22.9 acres).

Tier 2 Projects include:

1. Piper Drive residential development (1,250 units). The 1,250 unit development is an order of magnitude estimate and is not reflective of an actual development proposal.

Figure 1 shows the location of the proposed developments used for the fee evaluation.

Findings

1. Sewer Capacity Fee

The approach to determine the Sewer Capacity Fee was to identify the incremental sewer Capital Improvement Project (CIP) costs associated with a set of proposed new developments and divided the costs by the incremental wastewater flow.

Base Wastewater Flow (BWF) for residential developments was estimated assuming 2.7 persons per unit and a flow factor of 90 (gpcd). BWF for commercial development was estimated assuming a flow factor of 1,000 gpd per acre of floor area and floor area ratio of 0.5. **Table 1** summarizes the estimated BWF and Peak Wet Weather Flow (PWWF) from each development.

Table 1: Proposed Development Estimated Flows

Development	No. of Units or Acreage	Existing 2002 BWF (gpd)	2004 Buildout BWF ^a (gpd)	New BWF Due to Proposed Development (gpd)	Change in BWF from 2004 Buildout (gpd)
Tier 1					
KB Residential	400 units	0	24,900	97,200	72,300
Swenson Residential	300 units	1,200	51,700	72,900	21,200
Auto Dealer Commercial	22.9 acres	0	2,800	11,500	8,700
Tier 2					
Piper Drive ^b	1,250 units	18,700	39,100	303,800	264,700

Notes:

- Flow estimates were rounded to the nearest 100 gpd.

Footnotes:

- From 2004 Master Plan Revision.
- The Tier 2 development is an estimate based on the best available information. No specific Tier 2 plans have been developed to date.

Tier 1 developments resulted in greater deficiencies than were observed in the 2004 Master Plan Revision modeling. The additional flows generated from the Tier 1 developments resulted in an additional surcharge deficiency in the 15-inch sewer on South Abel Street assuming that Project No. 10 Option 2, from the 2004 Master Plan Revision, the 18-inch diversion on Curtis from Main Street to Abel, is constructed. The proposed 18-inch diversion was also found to be deficient and needs to be up sized to 21-inch. To address this additional deficiency on South Abel Street, two options were evaluated. Option A is to upsize the existing deficient pipes on Main Street and not to construct the diversion on Curtis. Option B would be to build the diversion on Curtis and upsize the existing 15-inch pipe to 18-inches on Abel. By comparing the costs of these two alternatives, the option of diverting the flow to Abel and upsizing the pipe along Abel was less expensive and would give the City more flexibility for flow routing. Therefore, option B is the recommended alternative. The recommended improvements are shown in Figure 2 (the figure shows a 21-inch pipeline along Abel Street as the Tier 2 development requires the 18-inch to be upsized).

Tier 2 development resulted in three additional surcharge areas. In two of these areas, the hydraulic grade line was three or more feet below existing ground, and therefore no projects were proposed. The third surcharge area was along Curtis Avenue, east of Main Street. This surcharge area requires the existing 15-inch and 16-inch pipelines on Curtis Avenue to be upsized. The recommended improvements are shown in Figure 3.

Table 2 summarizes the estimated CIP costs for the Buildout 2004 Master Plan scenario and the two Tiers.

Table 22: Estimated Costs for Capital Improvement Program (CIP)

CIP	Total CIP Cost Estimate^a
Buildout 2004 Master Plan Revision	\$4,720,000 (Total)
Tier 1^b	\$5,480,000 (Total)
Buildout 2004 Master Plan Revision	\$4,720,000
Incremental Curtis Avenue Diversion (625 ft of 21-inch ^c)	\$50,000
Abel Street Replacement (1,460 ft of 21-inch) ^c	\$830,000
Tier 1 & 2^d	\$5,940,000 (Total)
Buildout 2004 Master Plan Revision	\$4,720,000
Incremental Curtis Avenue Diversion (625 ft of 21-inch ^c)	\$50,000
Abel Street Replacement (1,460 ft of 21-inch)	\$830,000
Curtis Avenue Replacement (690 ft of 18-inch)	\$340,000

Footnote:

- Costs based on June 2004 ENR (SF) CCI of 8146 rounded to the nearest 1,000 dollars. Total Project cost were estimated based on a unit pipeline cost of \$16 per inch per linear ft plus 30% construction contingency and 30% implementation contingency.
- Includes upgraded 21-inch on Abel Street and new 21-inch Curtis Avenue Diversion.
- With implementation of the Tier 1 developments, the HYDRA Model predicted that the existing 15-inch Abel Street sewer would need to be improved to 18-inches. With implementation of Tier 2, the sewer would need to be improved to 21-inches. From a practical standpoint, the Abel Street sewer replacement would be constructed as a 21-inch sewer with Tier 1. Therefore, the estimated cost for the Abel Street Replacement in Tier 1 is for a 21-inch line.
- Includes upgraded 21-inch on Abel Street and new 21-inch Curtis Avenue Diversion.
- The costs shown represent the incremental costs of going from an 18-inch diversion to a 21-inch diversion. Costs for the 18-inch diversion are included in the Buildout 2004 Master Plan Revision costs.

Figure 22: Tier 1 Improvements

Figure 33: Tier 1 and 2 Improvements

Sewer capacity fees were developed based on incremental costs and flows associated with Tier 1, Tier 2, and Tier 1 and 2 combined. Incremental costs were divided by the incremental BWF resulting in a unit fee per gpd BWF. Table 3 summarizes the sewer capacity impact fee estimate for the two tiers. Additional details of the calculation may be found in Appendix A.

Table 33: Estimated Sewer Capacity Fee Details

Parameter	Option 1		Option 2
	Tier 1 ^a	Tier 2 ^b	Tier 1 and 2
Incremental Cost	\$880,000	\$340,000	\$1,220,000
Incremental BWF (gpd) (See <u>Table 1</u>)	102,200	264,700	366,900
Sewer Capacity Fee (per gpd BWF)	\$8.61	\$1.74	\$3.33

Footnote;

- The Tier 1 Abel Street sewer improvements should include a 21-inch line to meet estimated future needs. Therefore, the Tier 1 Incremental cost reflects the estimated capital cost of constructing a 21-inch sewer on Abel Street.
- Tier 2 only includes cost for improvements to the Curtis Avenue sewer as the increment costs for the Abel Street sewer are assumed to be covered in Tier 1.

During the KB development review process, the City decided that a cost effective approach to the sewer improvements would be to have KB Homes pay for and construct the necessary sewer capacity upgrades for Tier 1 (shown in Figure 2) as a condition of the their development. This strategy for addressing sewer capacity requirements lowers the overall sewer capacity fee that the City needs to recover for sewer infrastructure. The Tier 1 sewer capacity upgrades include a 21-inch sewer on Abel Street and a 21-inch diversion pipe from Curtis Avenue to Abel Street.

The remaining Tier 2 sewer improvement costs of \$340,000 (east Curtis Ave. sewer capacity improvements) will then be the basis for the sewer capacity fee. The premise for this fee is that KB, Swenson, the Auto Dealership, and Piper Drive development would all pay a proportional share (according to incremental BWF) for the east Curtis Ave. sewer capacity improvements. Table 4 summarizes the details of the recommended Sewer Capacity Fee for all developments after KB.

Table 44: Recommended Sewer Capacity Fee Details

Parameter	Value
Incremental Cost	\$340,000
Incremental BWF (gpd) (See <u>Table 1</u>)	366,900
Sewer Capacity Fee (per gpd BWF)	\$0.93

2. WPCP Capacity Fee

The WPCP Capacity Fee is the second element of the Developer Impact Fee that will be assessed for BWF above the Buildout 2004 MP Revision BWF scenario. The costs associated with the WPCP capacity were calculated based on four items; facility replacement values, land value, bufferland value and WPCP capital reserve funds. Details on the evaluation are included in Appendix B. The following are the assumptions used to calculate the cost per BWF:

- The capacity fee associated with wastewater treatment facilities was estimated based on June 2004 values. Wastewater facility and original facility land values were escalated based on ENR

(SF) CCI of 8,146 for June 2004 with the exception of the recently acquired Cargill Bufferland cost which was assumed to be the investment cost of \$13,512,500.

- The *WPCP Five-Year 2005-2009 CIP Revenue and Cost Summary* dated 4/1/04 was the best available information on the June 2004 value of the Capital Improvement Program (CIP) reserve funds. The value of the CIP Reserve Funds (end of FY 2003-2004) that was used in this evaluation is an estimate and was not based on an audited financial report.
- The wastewater capacity fee is based on the capital value of treatment for the West Valley Sanitation District (WVSD) as initial communication regarding purchase of capacity has been amenable. The actual purchase cost of additional treatment capacity will be contingent on availability and the willingness of an agency to sell.
- The *Master Agreement for Wastewater Treatment between City of San Jose, City of Santa Clara, and City of Milpitas* (Master Agreement) defines the cost share methodology for the WPCP Capital Improvement Program (CIP) which is based on flow and wastewater constituent allocations. For the capacity fee analysis, facility and original land values were proportioned according to a revised cost allocation evaluation based on flow allocation, constituent allocation, and the capital value (Form 8A, June 2003) of the WPCP facilities.
- The WPCP facility value also includes cost associated with the South Bay Action Plan (SBAP). Typically, the capital value of a new facility is not considered in the overall value of the WPCP facility until projects are completed. Reliability improvements and other CIP improvements that are being implemented are also incorporated into the capacity fee via the reserve fund value. The reserve fund value is representative of costs that are encumbered by the member agencies during implementation, therefore the reserve fund value is considered in this evaluation.
- Land value was based on the 1982 value identified in the Master Agreement and was escalated to June 2004 value. Land costs for the existing WPCP facilities were allocated according to the facility value cost share methodology for the WPCP.
- Bufferland costs were proportioned according to the percentages shown in the *WPCP Five-Year 2005-2009 CIP Revenue and Cost Summary*. This methodology was used as the City of Milpitas cost share record for the bufferland was consistent with the percentages from the Revenue and Cost Summary.

The WPCP capacity fee evaluation included an assessment of all tributary agencies to the WPCP. However, as described above, the WVSD treatment value was used to estimate the **WPCP Capacity Fee of \$6.57 per gpd BWF (June 2004 Value)**. The WPCP Capacity Fee element can be evaluated annually as capital improvements at the WPCP will alter the capital value of the facility and value increases according to inflation.

As a comparison value, a WPCP Capacity Fee weighted average (all tributary agencies) based on flow allocation was estimated to be \$7.00 gpd BWF. Although the weighted average value may be a better indicator of the true capital value of the WPCP facilities, the capital value of the WVSD capacity allocation was used for the impact fee as WVSD is the anticipated seller of capacity. For additional details on the WPCP Capacity Fee see Appendix B.

3. Main Pump Station Capacity Fee

The approach for developing the Main Pump Station Capacity Fee is to estimate the capital value of the Main Pump Station per gpd BWF. The City is currently planning to replace the existing Main Pump Station, which has reached its existing flow capacity. Although, the available pumps at the Main Pump Station have a design capacity that meets future needs, the actual capacity is lower due to operational constraints and impacts. Therefore, it is assumed that the Main Pump Station has reached its useful capacity.

The CIP budget (2004-2009 City of Milpitas) for the Pump Station replacement is \$19.0 million for a PWWF capacity of 40 mgd. The cost and capacity of this replacement pump station was based on previous master planning efforts. Based on the estimated PWWF from the 2004 Master Plan Revision, the pump station cost and capacity is expected to be refined. However, the estimated CIP budget of \$19 million was the best available information at the time of this assessment. The pump station replacement budget included construction of an operations building, demolition work, design, construction management, and other miscellaneous costs.

Since the Main Pump Station has reached its useful capacity, a new pump station is needed to meet any increase in future flows that are a result of future development. Under this premise, the estimated capital cost of ~~\$19.0~~ \$16.0 (Note: Use this figure since that is the one in the 2004-2009 CIP) million for the New Main Pump Station will be recovered through fees to all future developments that result in flows above the Previously Purchased Treatment Plant Capacity. With an estimated future incremental BWF above the Previously Purchased Treatment Capacity of 3,066,900 gpd, the Main Pump Station Capacity Fee was estimated to be ~~\$6.20~~ (Note: revise) per gpd BWF. ~~Table 5~~ Table-5 summarizes the pertinent wastewater flow assumptions and details that are used to develop the fee.

Table 55: Wastewater Flow Assumptions and Details

Parameter	Value
Pump Station Cost ^a	\$19,000,000
Estimated Future Development BWF ^b (gpd)	3,066,900
Main Pump Station Capacity Fee (per gpd)	\$6.20

Footnote:

- The pump station cost was assumed to be equivalent to the City's Pump Station CIP Budget.
- The estimated future development BWF was determined as the 2004 Master Plan Revision Buildout BWF (xxx gpd) minus the Previously Purchased Treatment Capacity plus the Tier 1 and 2 incremental BWF (xxx gpd). The Previously Purchased Treatment Capacity is assumed to be equal to the 2002 existing BWF (xxx gpd) from the 2004 Master Plan Revision.

Conclusions

A new development will be subject to three fees, Treatment Plant Fee, the Developer Impact Fee, and the Main Pump Station Capacity Fee. The Treatment Plant Fee is the existing development fee that is determined based on the number of dwelling units or floor area ratio (for commercial and industrial development). The Developer Impact Fee is comprised of a WPCP Capacity Fee and a Sewer Capacity Fee. The Developer Impact Fee will be assessed to a new development based on the incremental BWF above the 2004 Master Plan Revision Buildout BWF. The Main Pump Station Capacity Fee for a new development will be assessed to a new development based on the incremental BWF above the Previously Purchased Treatment Capacity.

~~Table 6~~ Table-6 summarizes the recommended Developer Impact Fee rate and the Main Pump Station Fee rate. The Developer Impact Fee is a function of capital value of treatment and infrastructure facilities and

is indexed to June 2004 ENR SF CCI which can be adjusted annually. The capital value of the WPCP facilities could also be increased as capital improvement projects are completed.

Table 66: Developer Impact Fee and Main Pump Station Capacity Fee Rate

Element	Fee per gpd BWF
Developer Impact Fee ^a	\$7.50
Main Pump Station Capacity Fee	\$6.20

Notes:

1. These fees are based on June 2004 ENR SF CCI of 8146.

Footnotes:

- a. The Developer Impact Fee is the sum of the Sewer Capacity Fee and the WPCP Capacity Fee (\$0.93 + \$6.57). The WPCP Capacity Fee element is based on the estimated value of WVSD WPCP Capacity.

Appendix A – Pump Station and Infrastructure Fee Evaluation

Appendix B – WPCP Capacity Costs Evaluation